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Re: Application No. 10/031,890 - request for reconsideration

Dear C. Marks,

I would like to request that you reconsider the above application, with the amended claims that I attach, and in the light of my comments below.

In the following text I first explain in section (a) the amendments to the claims, then explain in section (b) why the claims present novel and non-obvious material, and then in section (c) respond to each specific point in the action.

(a) The Amended Claims

(1) I cancelled claims 1 and 2, and replaced them by two new claims. The new claims are attached.

(2) The new Claim 1 is a re-write of the original Claim 1. I present this as a new claim rather than amended claim with marking because there are so many changes that the result seem to me unreadable. The contents of the new claim 1 are essentially the contents of the original Claim 1 with these modifications:

- a) Removing the references to the game manager and its contents and the character display, because these do not add to the novelty of the invention.
- b) Adding a reference to "various games". This is based on the list of games on p.9.
- c) Adding the keeping of record of the current player's colour. This is made explicit in the description in step (i) of the operation of the software at the bottom of p.8, and is implicit in the description of the game. It is illustrated in figures 1-3 by the turn lights 5.
- d) Changing the language in the second half of the claim to explicitly refer to the behaviour of the board as it seen from outside, rather than to its internal working.
- e) informalities changes: adding line spaces, indentation; removing capitalisation, italics and reference digits.

(3) Apart from removing useless references and adding the reference to various games, the new version of Claim 1 is essentially a much better expression of what I would like to patent, rather than a claim to a different material from the original Claim 1.

(4) The new Claim 2 is really new. It has exactly the same meaning as the default settings which are described in the third paragraph of p. 8, but avoiding the special terminology that is used in the description. The special terminology is explained in the description in the two preceding paragraphs (starting with “The FillIt Game” at the bottom of p.7) and figure 4. The “points on a grid line” correspond to the ‘+’ pattern in the description, the “points on 45 degree diagonal” correspond to the ‘X’ pattern, the treatment of points in the player’s colour corresponds to the setting of *current* in the description, and the treatment of unilluminated points or points that are illuminated in the other player’s colour correspond to the setting of *empty-and-other*.

(b) Novelty and non-obviousness of the claims

(1) The novel part of Claim 1 is its last two-thirds, starting with “ which exhibits a behaviour ..”. This part is a description of the behaviour of the board, and hence it is patentable, and the question is whether it is novel and non-obvious.

(2) Compared to Blumberg *et al* (US 4,417,425), what is described in Claim 1 is a completely different construction. At the concept level, the difference is that Blumberg *et al* describe and claim a puzzle device, while my application describes a two-players games board (behaving in a specific way).

(3) At the details level, the main differences are that all the discussion in Blumberg *et al* is about puzzles for a single player (the mention of “two or more players” in column 5 line 48 is obviously two or more players playing a single-player puzzle one after the other) and the ideal size of the board is regarded as 4x4 or 5x5 (column 2 line 47). These are suitable for a puzzle device as Blumberg *et al* claim, but not for a two-players board.

(4) The Lites Out! program has two colours, but it is still a single-player puzzle program, without any concept of taking-turn games (i.e. one player presses a point and then it is the other player’s turn) like the current invention.

(5) Moving from Blumberg *et al* or from Lites out! to the current application is a very non-obvious move. It requires a combination of the following modifications:

- a) Assigning a colour to a player. Since Blumberg *et al* is a hand-held puzzle device, this is not an obvious step at all. The same is true for a computer program, where it is not obvious how two players can play together.
- b) Adding taking-turn games. Again non-obvious in a hand-held device.
- c) Making the object of the game comparing the number of point in each colour. Blumberg *et al* are very open about what the goals can be, but that doesn’t make it obvious to have as a goal more points in one colour than the other.
- d) Making the board response in a specific way (switching on unilluminated points inside the pattern in the current player’s colour, and reversing illuminated points). This is not obvious, because it is not obvious that it gives an interesting game.
- e) Make the board “desktop”, or in anyway easily accessible to two players.

f) Making the board larger. In my application, the “typical size” in the text is 36-1000 points (sixth line of second paragraph on page 2), and figures 2-3 show a board of 9x9. Blumberg *et al* prefer 4x4 or 5x5 (column 2 line 47). Therefore, the reader of Blumberg *et al* will be thinking about 5x5 devices. On a device this size, the game in my application is not interesting, because it will finish in very few turns, and have very small number of possibilities. Note that the number of possibilities does not grow linearly with the number of points, but exponentially, so the number of possibilities on a 9x9 board is many order of magnitudes more than on a 5x5 device.

(6) Steps (e) and (f) may seem obvious, but they are not, because they increase substantially the price of the device. The extra cost will have to be justified, and this will require some innovation, like adding many taking-turn games, but apart from Othello and Go all these games are new in the priority document of the current application. Thus for an expert in the field, who is aware of the cost implications, taking the puzzle device from Blumberg *et al* and enlarging it is actually very non-obvious. This is the reason that there aren't yet in the market any such devices playing Othello or Go.

(7) To actually get to my game, the reader will have to contemplate all of the points above together, and this is a very non-obvious thing to do. A person reading Blumberg *et al* and considering possibilities of new games would come up with some kind of new single-player puzzles which are suitable for a 5x5 device, rather than any of the two-players games that I describe in my application.

(8) The game Othello presents points (a), (b) and (c). As I wrote above in (6), it is not obvious to combine Othello with Blumberg *et al*, because of the costs associated. More importantly, the obvious result of combining Othello and Blumberg *et al* is to implement Othello on an enlarged device. Othello is a radically different game from the one that I describe because of the following reasons:

- a) In Othello, moves are restricted to a small number of legal moves (moves that “trap” points of the other colour), typically less than 10 possible legal moves on a board with 64 points. For example, in the first move there are only 4 legal moves, and the following move only 3. In many situations there is only 1 legal move, and situations where one side doesn't have any legal move are not that rare. In the game of the current application, there are no such restrictions, and the number of possible moves is the number of unilluminated points. This results in a very different game, because a significant part of the point of Othello is forcing the opponent to perform a bad move and avoiding being forced to do such move. In my game this idea does not exist.
- b) In Othello, one point is becoming illuminated at each move. That means the number of turns that need to be played is close to the number of points on the board. In the current game, many points become illuminated in each move, so many less turns are required, and each game is much shorter than Othello.
- c) In Othello, illuminated points that get reversed are not defined by a pattern around the pressed point, but points that are “trapped”. While this can also be called “pattern”, it is a fundamentally different kind of pattern, because it doesn't have a fixed geometrical shape.

d) In Othello, only points of the other player's colour reverse their colour. In the current game, points of the current player's colour also get reversed, so the player must consider this too.

(9) The combination of these differences create completely different games. An Othello game has many turns, with relatively small number of possibilities in each turn, where the players make long-term plans, build their position, try to force the opponent to a bad move and try to take control on important points. The game in the current application has small number of turns, large number of possibilities in each turn (except the last few moves), and there aren't really important points or bad moves. Thus it would be extremely non-obvious to go from a board playing Othello to a board behaving according to the current application. That is true even taking Blumberg *et al* into account, because it is not obvious at all how the puzzles that are described in Blumberg *et al* can be combined with Othello.

(10) The only other known two-players game which is played by putting pebbles on a grid, and hence is suitable to implement on such board, is the game Go. However, the nature of Go is even further from the nature of my game than Othello, because there is no reversing of colours (only switching off of surrounded points). Go is also normally played on much larger board (19x19), and has a very deep strategic content. Thus considering Go does not make it more obvious to move in the direction of my game.

(11) Golad 1998 (WO 98 19758), which was cited by the international search report, is actually closer to the current invention in its nature than Blumberg *et al*, because it also describes a "desktop", relatively large (8x8) board, rather than a puzzle device. It also gives an example of a single game, which is very similar to Othello, because it is also based on trapping (p.5 line 26 to p.6 line 27) (It is actually describing Rolit, see www.goliathgames.nl, family category. They claim incorrectly that it is a "Go"-like game). Therefore, it is in a sense a combination of Blumberg *et al* with Othello or Rolit. However, this is still different from the behaviour which is described in Claim 1 by points (a)-(d) in (8) above, and therefore it is still very non-obvious to move from the board that is described in Golad 1998 to a board behaving the way that I describe. Golad 1998 also gives an "experimental evidence" that the behaviour that is described in Claim 1 is not obvious, because even though they do consider a large, "desktop" board, and consider the possibility of various games, they did not think of games with similar behaviour.

(12) Thus the behaviour that is described in Claim 1 is novel and non-obvious with respect to all the cited documents. Indeed, even now, 4.5 years after the priority date, there isn't any similar game anywhere on the internet, except on my own site at <http://maldoo.com>. It may be useful to try the game at this site (the game is called "FillIt"), to realise how different it is from the other games.

(13) The new Claim 2 describes the default pattern. This makes it clearer how different the game is from Othello and Rolit. The pattern is non-obvious, because it is not obvious what pattern (if any) will give an interesting game out of the huge number of possible patterns.

(c) Responses to specific parts of the action

Information Disclosure Statement - I understand that is as a comment that doesn't require any action from me.



It may be worth pointing out that the "Guide To Filing A Utility Patent Application", both the printed and the online versions, doesn't mention form PTO/SB/08, which I just found about now by calling the IAC and asking specifically about it.

Claim Objections - Informalities - I tried to fix all the points in the amended claims.

Drawings - As described above, I have removed any reference to the game manager and its contents from the claims, and therefore there is no need to show them in the drawings. All the features in the amended claims that can be reasonably illustrated in a drawing are illustrated. In particular concerning the new material compared to the original claims, "various games" cannot be illustrated, the record of the current player's colour is illustrated by the turn lights in figures 1-3, and the patterns in Claim 2 are shown in Figure 4.

Claim Rejections - 35 USC 101 - The amended claims do not refer to a program, just to the behaviour of the board, and are therefore patentable.

Claim rejections - 35 USC 112 - The amended claims clearly describe the subject matter that I claim, i.e. the behaviour of the board.

Claim Rejections - 35 USC 103 - I discussed above in section (b) why the board that is described in Claim 1 is novel and non-obvious over and above Blumberg *et al* and Lites out!, even when combined with Othello.

Thanks,

Yehouda Harpaz

CLAIMS

1-2 (cancelled)

- 1 (New) An electronic board comprising a grid of grid points on a flat surface, where each grid point is a visible element which is capable of detecting when it is pressed, and an illumination source inside or below the surface which is capable illuminating the visible element by either of two colours;

which exhibits a behaviour which makes it useful for playing various games;

and in one of these games the behaviour of the board is as follows:

the board keeps a record of the current player's colour, which is one of the two colours above;

when a player presses a grid point, the board changes the illumination of a pattern of grid points around this grid point to the current player's colour if they were switched off, or reverses their colour if they were on, and then changes the record of the current player's colour to the other colour;

when all the grid points are switched on, the board declares as the winner the player of the colour of the majority of the grid points.

- 2 (New) A board as described in claim 1, where the grid is square, and when a player presses an unilluminated grid point the board responds as follows:

points that are illuminated in the player's colour and are 1 point away from the pressed point on a line of the grid or a 45 degrees diagonal line become illuminated in the other player's colour.

the pressed point and all the points that are unilluminated or are illuminated in the other player's colour and are 1 or 2 points away from the pressed point on a line of the grid or a 45 degrees diagonal line become illuminated in the player's colour.